

Notice of Allowability

Application No.

10/711,763

Examiner

Faye Boosalis

Applicant(s)

ERTEL ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to submission of 6 December 2006.
2. ☒ The allowed claim(s) is/are 1-4,8-12,14-21,23-29,31 and 32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

Comment on Submissions

1. This communication is responsive to submissions 6 December 2006.

Allowable Subject Matter

2. Claims 1-4, 8-11 and 27-28 were previously allowed
3. Claims 12, 14-21, 23-26, 29, 31-32 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 12, the prior art does not disclose or fairly suggest a solid state x-ray detector comprising: a viscoelastic material secured externally to the housing (enclosing the scintillator layer, the array of photosensitive detector elements, and the glass substrate) and confined to respective identified prospective impact corners of the periphery of the housing.

The examiner notes that while it is known in the art for a solid state x-ray detector comprising: a scintillator layer (904) configured to output light in response to x-ray exposure; an array of photosensitive detector elements (401) supported by a glass substrate (see for example Endo et al -- US 5,965,872 A -- col. 9, lines 31-34) and configured to store electrical charge as a function of light output by the scintillator layer during data acquisition and output electrical signals indicative of the stored electrical charge during readout (see for example Endo et al -- US 5,965,872 A -- col. 9, lines 9-22); a housing (101) enclosing the scintillator layer, the array of photosensitive detector elements, and the glass substrate (400) (see for example Endo et al -- US 5,965,872 A - Fig. 10). A x-ray detector wherein in impact-absorbing material (38) is a viscoelastic

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material (i.e. plastic, rubber or elastic material) (see for example *Watanabe et al --US 2002/0005490 A1--* Abstract and paragraph [0037]) secured to the housing (31a) and located in the one or more discrete cavities (51) substantially confined to respective identified prospective impact corners or a periphery of the housing (31a) (see for example *Watanabe et al --US 2002/0005490 A1--* Fig. 7 and paragraph [0039]), the prior art does not suggest a solid state x-ray detector comprising: viscoelastic material secured externally to impact corners of a periphery of housing structure.

Regarding independent claim 20, the prior art does not disclose or fairly suggest a cover assembly to encase components of an x-ray detector, the cover assembly comprising a transverse layer, coextensive with an expanse of a major dimension of the top panel of the housing, of viscoelastic material between the scintillator layer and an undersurface of the top panel of the housing.

The examiner notes that while it is known in the art a cover assembly (18) to encase components of an x-ray detector (10), the cover assembly comprising: a top support panel (18) and a bottom support panel (18) collectively defining an internal volume configured and sized to house components of an x-ray detector (see for example *Frederick et al --US 5,796,109 A--*Fig. 2). At least one substantially transverse cavity formed in at least one of the top support panel and the bottom support panel (see for example *Watanabe et al --US 2002/0005490 A1--* Fig. and paragraphs [0038] and [0057]); and viscoelastic impact-absorbing material (i.e. elastic sheet-like rubber, gel material or plastic) that comprise a first impact-absorbing material portion disposed in the at least one substantially transverse cavity (see for example *Watanabe et al --US*

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2002/0005490 A1-- paragraph [0038] and [0057]), the viscoelastic impact-absorbing material different from the top support and bottom support panel are formed; at least one corner cavity substantially confined to a respective corner of the at least one of the top support panel and the bottom support panel (see for example *Watanabe et al --US 2002/0005490 A1--* Fig. 7 and paragraph [0048]); and a second impact-absorbing material portion of the viscoelastic impact-absorbing material (i.e. elastic sheet-like rubber, gel material or plastic) disposed in the at least one corner cavity, the prior art does not suggest a cover assembly, encasing components of an x-ray detector, wherein a transverse layer, as disclosed supra, of viscoelastic material is between the scintillator layer and an undersurface of the top panel of the housing.

Regarding independent claim 32, the prior art does not disclose or fairly suggest a solid state x-ray detector comprising: a transverse layer of viscoelastic material sandwiched between the scintillator layer and the undersurface of the top panel of the housing.

The examiner notes that while it is known in the art a cover assembly (18) to encase components of an x-ray detector (10), the cover assembly comprising: a top support panel (18) and a bottom support panel (18) collectively defining an internal volume configured and sized to house components of an x-ray detector (see for example *Frederick et al --US 5,796,109 A--*Fig. 2). At least one substantially transverse cavity formed in at least one of the top support panel and the bottom support panel (see for example *Watanabe et al --US 2002/0005490 A1--* Fig. and paragraphs [0038] and [0057]); and viscoelastic impact-absorbing material (i.e. elastic sheet-like rubber, gel

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material or plastic) that comprise a first impact-absorbing material portion disposed in the at least one substantially transverse cavity (see for example *Watanabe et al --US 2002/0005490 A1--* paragraph [0038] and [0057]), the viscoelastic impact-absorbing material different from the top support and bottom support panel are formed; at least one corner cavity substantially confined to a respective corner of the at least one of the top support panel and the bottom support panel (see for example *Watanabe et al --US 2002/0005490 A1--* Fig. 7 and paragraph [0048]); and a second impact-absorbing material portion of the viscoelastic impact-absorbing material (i.e. elastic sheet-like rubber, gel material or plastic) disposed in the at least one corner cavity, the prior art does not suggest a cover assembly, encasing components of an x-ray detector, wherein a transverse layer, as disclosed supra, of viscoelastic material is between the scintillator layer and an undersurface of the top panel of the housing.

The remaining claims 14-19, 21, 23-26, 29 and 31 are allowable based on its dependency.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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OTILIA GABOR
PRIMARY EXAMINER